

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-19. (Cancelled).

20. (Currently Amended) A method of manufacturing a microlens array, comprising:

providing a substrate having a plurality of photo sensors located therein;

forming a dielectric layer over the substrate, the dielectric layer having a surface opposite the substrate;

forming a microlens layer comprising a plurality of microlenses on the dielectric layer surface, each of the plurality of microlenses including a substantially convex portion substantially aligned over a corresponding one of the plurality of photo sensors, wherein the plurality of microlenses are separated by a plurality of gaps that each reveal a portion of the dielectric layer surface, wherein forming the microlens layer comprises:

depositing a microlens material layer over the dielectric layer, the microlens material layer comprising a polymer material;

patterning the microlens material layer; and

heating the patterned microlens material layer to form the plurality of microlenses;

forming a dielectric film on the microlens layer and contacting the dielectric layer surface through each of the plurality of gaps;

forming a color filter over the dielectric film; and

forming a protective layer over the color filter;

wherein a fill factor corresponding to a ratio of a first amount of light incident on the microlens array and a second amount of light incident on the plurality of photo sensors is at least about 50%; and

wherein the microlens layer is not integral to the dielectric layer.

Claims 21-27. (Cancelled).